

ABSTRACT

Compositions and methods for administering a therapeutic agent to a mammal are disclosed. The compositions comprise either (i) vesicles comprising an amphiphilic substituted fullerene, wherein the therapeutic agent is present in the vesicle interior or
5 between layers of the vesicle wall, (ii) a substituted fullerene, comprising a fullerene core and a functional moiety, wherein the therapeutic agent is associated with the substituted fullerene, or (iii) carbon nanotubes, wherein the therapeutic agent is covalently bonded to the carbon nanotubes.